Sports, Cardiovascular, and Wellness Nutrition
a dietetic practice group of the Academy of Nutrition and Dietetics

2013 Lifestyle Recommendations for LDL-Cholesterol and Blood Pressure Reduction

Cardiovascular disease remains the leading cause of death in both men and women and among all major ethnic groups in the United States and many other developed and developing countries[1].

In November 2013, the American Heart Association (AHA) and American College of Cardiology (ACC) released new evidenced-based guidelines for cardiovascular risk assessment, cholesterol management, lifestyle management, and obesity management for prevention of cardiovascular disease. It is critical that all healthcare providers including registered dietitian nutritionists (RDN) understand the key features of these guidelines, their strengths and limitations, what they mean to their practice, and how best to implement them[2-4].

Features of the new Guidelines

Assessment of Cardiovascular Disease

- New risk-scoring system, the "Pooled Cohort Equations," estimates 10-year risk of total cardiovascular disease (http://my.americanheart.org/professional/StatementsGuidelines/PreventionGuidelines/Prevention-Guidelines_UCM_457698_SubHomePage.jsp).
- System is appropriate for a wider range of racial and ethnic groups than previous scoring systems.
- These scores are also used to determine who should be given preventive treatments such as statin medications[2].

Specific goals for LDL Cholesterol Levels

- No longer recommended[3].

Revised Recommendations for Statin Therapy

- Moderate- or high-intensity statin medications are recommended for the following patients:
  a. LDL-cholesterol of 190 mg/dl or higher, or
  b. Cardiovascular disease and ≤ 75 years of age, or
  c. Diabetes (Type 1 or Type 2) and 40 to 75 years old, regardless of LDL-cholesterol levels, or
  d. Previously identified 10-year cardiovascular risk of 7.5 percent or greater when LDL-cholesterol levels are less than 190 mg/dl and age 40-75 years[3].

- Lifestyle modification remains a critical component of cardiovascular disease risk reduction, prior to and with the use of statin therapy.

Testing to Identify Further Treatment Recommendations:

- If, after completing risk assessment, a risk-based treatment decision is uncertain, assess one or more of the following:
  a. Family history,
  b. High-sensitivity C-reactive protein,
  c. Coronary artery calcium score, or
  d. Ankle-brachial index
- Guidance from large-scale studies done in the past decade regarding the utility of each of these tests for risk prediction may be considered in making informed treatment decisions[3].

Dietary and Physical Activity Recommendations:

- Follow the DASH dietary pattern, the USDA Food Pattern or the American Heart Association diet plans to increase vegetable and fruit intake.
- Maintain no more than 5 to 6 percent of calories from saturated fat.
- Reduce percent of calories from *trans* fat.

- Keep sodium intake to < 2,400 milligrams per day; 1,500 milligrams per day for those with hypertension and /or at high risk for atherosclerotic cardiovascular disease; or at least decrease sodium intake by 1,000 milligrams per day.

- Include moderate to vigorous-intensity aerobic physical activity; 3 to 4 sessions per week lasting on average 40 minutes per session to lower cholesterol or blood pressure[4].

Dietary Planning and Nutrition Counseling:

- Referral to a registered dietitian nutritionist (RDN) for medical nutrition therapy helps to personalize cardio-protective meal planning to patients' individual needs[4].

Evaluation of Overweight and Obesity:

- Body mass index calculated annually or more frequently.
- A baseline score of 25-29.9 continues to define overweight and 30 and over defines obesity.
- Waist circumference measured during annual visits, and more frequently in overweight or obese individuals. Levels over 40 inches in men and over 35 inches in women define abdominal obesity.
- Patients should be counseled on modest weight loss (3-5 percent of body weight) as this can result in meaningful benefits in reducing diabetes and cardiovascular disease risk factors[5].

Comprehensive Lifestyle Management:

- Reduced calorie intake and increased physical activity for overweight and obese individuals.
- High-intensity counseling should be provided by a trained interventionist such as a registered dietitian nutritionist for a minimum of 14 visits over 6 months in an individual or group program.[5]

Resources

1. US Department of Agriculture. Dietary Guidelines for Americans 2010. Available at: http://www.cnpp.usda.gov/Publications/DietaryGuidelines/2010/PolicyDoc/ExecSumm.pdf Accessed December 3, 2013).
2. 2013 ACC/AHA Guideline on the Assessment of Cardiovascular Risk *Circulation*. 2013: published online before print November 12, 2013, 10.1161/01.cir.0000437741.48606.98.
3. 2013 ACC/AHA Guideline on the Treatment of Blood Cholesterol to Reduce Atherosclerotic Cardiovascular Risk in Adults *Circulation*. 2013: published online before print November 12, 2013, 10.1161/01.cir.0000437738.63853.7a.
4. 2013 AHA/ACC Guideline on Lifestyle Management to Reduce Cardiovascular Risk *Circulation*. 2013: published online before print November 12, 2013, 10.1161/01.cir.0000437740.48606.d1.
5. 2013 AHA/ACC/TOS Guideline for the Management of Overweight and Obesity in Adults *Circulation*. 2013: published online before print November 12, 2013, 10.1161/01.cir.0000437739.71477.ee.

Contact SCAN
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Written by SCAN registered dietitians (RDs) to provide nutrition guidance. The key to optimal meal planning is individualization. Contact a SCAN RD for personalized nutrition plans. Access "Find a SCAN RD" at **www.scandpg.org** or by phone at **800.249.2875**.

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